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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,552	12/05/2003	Ian Rippke	42339-198344	7984
26694	7590	01/26/2006	EXAMINER	
VENABLE LLP P.O. BOX 34385 WASHINGTON, DC 20045-9998			NGUYEN, JOSEPH H	
			ART UNIT	PAPER NUMBER
			2815	

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

**Office Action Summary**

Application No.	Applicant(s)	
10/727,552	RIPPKE ET AL.	
Examiner	Art Unit	
Joseph Nguyen	2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 8-14, 26, 27, 29-33 and 38-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 8-14 and 38-40 is/are allowed.
- 6) ☒ Claim(s) 26, 27, 30, 31 and 33 is/are rejected.
- 7) ☒ Claim(s) 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 May 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 26-27, 29, 31 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwata et al (US 6,876,055 B2).

Regarding claim 26, Iwata et al. discloses in figure 17 a device comprising a material 314 of a first conductivity type (col. 22, line 14) formed directly on a semiconductor substrate 312; a first transistor 328 (col. 23, line 54) in the material 314; a body contact 321 (col. 22, lines 31-32) in the material; and a resistance region 316 (col. 2, line 10) disposed in the material between the first transistor and the body contact region, the resistance region having a resistivity higher than a resistivity of the material, wherein the substrate is of said first conductivity type (col. 2, line 8); and a second transistor 325 (col. 23, line 53) disposed in the material, wherein the second transistor is disposed on a same side of the resistance region as the body contact region 321.

Element 312 as shown in figure 17 is the layer on which the semiconductor device is formed. Therefore, element 312 can function as a substrate.

Regarding claim 27, Iwata et al. discloses in figure 17 the resistance region 316 substantially isolates the first transistor 328 from the body contact region 321.

Regarding claim 29, Iwata et al. discloses in figure 17 the body contact region 321 is adapted to be coupled to ground. Note that the body contact region 321 is coupled to bias input 329 (col. 22, line 29), which is considered "ground" herein.

Regarding claim 31, Iwata et al. discloses the resistance region 316 has an impurity concentration lower than an impurity concentration of the layer (see rejection of claim 6 above).

Regarding claim 33, Iwata et al. discloses in figure 17 the resistance region 316 occupies substantially an entire cross sectional area of the layer between the first transistor 328 and the body contact region 321.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata et al. in view of Wong et al. (US 6,246,094 B1).

Regarding claim 30, Iwata et al. discloses on figure 10 substantially all the structure set forth in the claimed invention except the layer being epitaxial layer.

Art Unit: 2815

However, Wong et al. discloses on figure 2D the layer 14 being epitaxial layer (col. 4, line 67 and col. 5, line 1). In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Iwata et al. by having the layer being epitaxial layer to prevent latch up in a CMOS integrated circuit (col. 1, lines 10-12).

### ***Allowable Subject Matter***

Claim 32 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-5, 8-14 and 38-40 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The reference (s) of record do not teach or suggest, either singularly or in combination at least the limitation of "a resistance region disposed in the material between the first transistor and the body contact region to substantially electrically isolate the first transistor from the body contact region, the resistance region having a resistivity higher than a resistivity of the material, wherein the resistance region has a non-zero impurity concentration lower than an impurity concentration of the material; and a discrete capacitor coupled between a body and a source of the first transistor" for claims 1 and 32, "a resistance region in the material between the first transistor and the body contact region, the resistance region having a resistivity higher than a resistivity of the material, wherein the resistance region comprises the same material as said

material but has a non-zero impurity concentration lower than an impurity concentration of said material” for claim 38.

### ***Response to Arguments***

Applicant's arguments filed 11/04/2005 have been fully considered but they are not persuasive.

With respect to claim 26, applicant argues lwata et al. does not disclose in figure 17: (1) the material is formed directly on a semiconductor substrate; (2) the material and the substrate must have the same conductivity type; (3) both transistors must all be formed in the material. However, lwata et al. clearly discloses in figure 17: (1) the material 314 is formed directly on a semiconductor substrate 312; (2) the material 314 and the substrate 312 are all formed of n type conductivity (col. 2, lines 8-9); (3) both transistors 325, 328 are formed in the material 314. Therefore, figure 17 of lwata et al. shows the claimed feature.

With respect to claim 30, applicant argues nowhere in Wong et al. is it taught that the use of an epitaxial layer is to prevent latch-up, nor is it true that the mere use of an epitaxial layer can prevent latch-up. However, Wong et al. teaches in col. 1, lines 10-12 the invention as a whole and an epitaxial layer is part of the invention is to prevent latch up. As such, there is a motivation to use this epitaxial layer disclosed by Wong et al. Nevertheless, if applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in any sense necessarily a reconstruction based upon hindsight

reasoning. But so long it takes into account only knowledge which was within the level of ordinary skill at the time the invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. In re McLaughlin, 443 F.2d 1392; 170 USPQ 209 (CCPA 1971).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

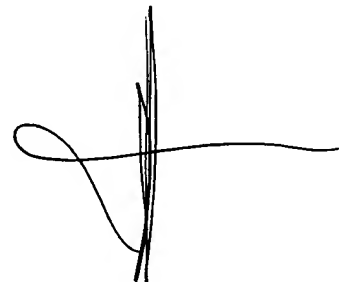
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Nguyen whose telephone number is (571) 272-1734. The examiner can normally be reached on Monday-Friday, 7:30 am- 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ken Parker can be reached on (571) 272-2298. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JN  
December 14, 2005.

A handwritten signature in black ink, consisting of a stylized 'K' followed by a horizontal line and a vertical line intersecting it.

**KENNETH PARKER**  
**SUPERVISORY PATENT EXAMINER**